

PROCEEDINGS
OF THE
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NEW SPECIES OF *KEWOCHTHONIUS* CHAMBERLIN
FROM CALIFORNIA (ARACHNIDA: CHELONETHIDA)

BY ROBERT O. SCHUSTER

University of California, Davis

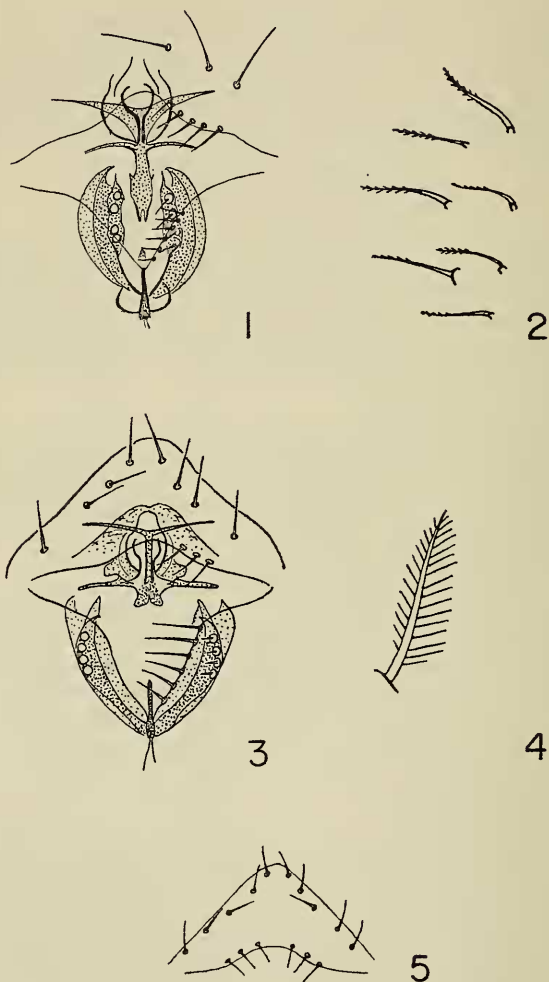
The only previously reported species of California *Kewochthonius* is *stanfordianus*, described by Chamberlin in 1929. Numerous collections from San Mateo County, near the type locality, have been of one species and it is assumed to be that described by Chamberlin. A similar but much larger species also occurs in California.

Another new species proposed here resembles *paludis* (Chamberlin) but, on the basis of descriptive information, differs in certain structural features. *K. paludis* is reported only from the eastern United States.

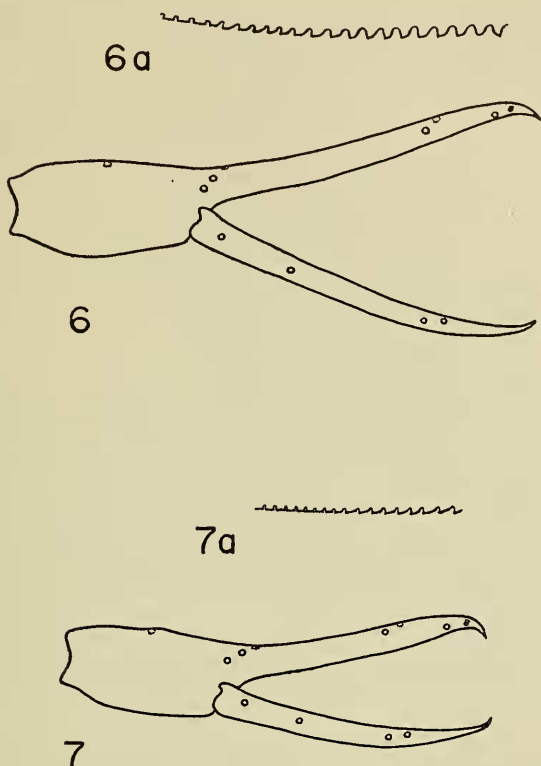
***Kewochthonius spingolus*, new species**

This interesting species shares a number of characters with *Chthonius californicus* Chamberlin. The seven spines of the second coxa and the space between the anterior and posterior pairs of internal genital setae resemble the condition encountered in *C. californicus*. These characters separate *spingolus* from other California species of *Kewochthonius*, and ally it with *K. paludis*. It differs from *paludis* by having 18 instead of 20 setae on the carapace. The length of the palpal femur is 350 μ for *paludis* and 450 μ for *spingolus*.

Male: Total length 1.25 mm. Carapace 385 μ long, faintly reticulate. Epistomal process of 12-14 teeth. Chaetotaxy of carapace: 4 in anterior row; 2 in posterior row: 18 total. Anterior eyes conspicuous, posterior eye spots large. Tergite border setae number 4:4:4:4:6:6:6:6:6:4:6:0. Palps with trochanter 150 μ long \times 105 μ wide. Femur 455 μ long \times 95 μ wide, widest distally. Tibia 180 μ long \times 105 μ wide. Chela 660 μ long, the movable finger 440 μ . Fixed finger with 52 teeth, the teeth largest at distal third (at level of setae *it* and *est*). Movable finger with about 30 poorly defined teeth. Coxa II with seven spines, four in an anterior row and three in a posterior row. Coxa III with three spines. Spines long and thin, their pinnulae short (Fig. 2). Male genital structure with anterior and posterior pairs of internal setae spaced, general facies as in Fig. 1. Chaetotaxy of sternites IV through XII approximately 11:8:6:6:6:6:7:6:2.



FIGS. 1, 2, *Kewochthonius spingolus* Schuster. 1, Male genital area, setae omitted from left side; 2, spines of coxa II. FIGS. 3, 4, *K. amplus* Schuster. 3, Male genital area, setae omitted from left side; 4, one spine of coxa II. FIG. 5, *K. stanfordianus* Chamberlin. Male anterior genital operculum.



FIGS. 6, 6a, *K. amplus* Schuster. 6, Male chela, setae and teeth omitted; 6a, marginal teeth of fixed finger. FIGS. 7, 7a, *K. spingolus* Schuster. 7, Male chela, setae and teeth omitted; 7a, marginal teeth of fixed finger.

Female similar except larger. Carapace $430\ \mu$ long, the palpal femur $520\ \mu \times 113\ \mu$, chela $770\ \mu$ long. Anterior genital operculum with one median seta, four or five anterolateral setae on each side. Sternite III with 14–15 setae, IV with ten setae, remaining sternites as for the male.

This species is known from five males and eight females collected along State Highway 78 between Ramona and Julian, 26 December 1958, by L. M. Smith. They were in litter beneath deciduous trees. The male holotype is deposited in the California Academy of Sciences.

Kewochthonius amplus, new species

The length of the palpal femur on male specimens assigned to *stanfordianus* Chamberlin varies from $335\ \mu$ to $390\ \mu$; for this species from $440\ \mu$ to $495\ \mu$. The five pairs of anterolateral setae on the anterior genital operculum of *stanfordianus* (Fig. 5) seem to be constant as does the occurrence of only four pairs for this species. North of San Francisco,

stanfordianus appears to be most prevalent along the coast while *amplus* is found in mountain areas in Napa and Yolo Counties and in the Sacramento Valley along the eastern border of the Coast Range.

Male: Total length 1.40 mm. Carapace 430 μ long, faintly reticulate. Epistomal process of about 15 teeth. Chaetotaxy of carapace: 4 in anterior row: 2 in posterior row: 18 total. Anterior eyes inconspicuous, posterior eye spots obsolete. Tergal border setae number 4:4:4:4:6:6:6:6:6:4:6:0. Palps with trochanter 182 μ long \times 123 μ wide. Femur 558 μ long \times 120 μ wide, widest proximally. Tibia 210 μ long \times 110 μ wide. Chela 770 μ long, the movable finger 540 μ . Fixed finger with about 45 teeth, the teeth largest opposite seta *it*. Movable finger with about 33 weak teeth. Coxa II with four spines in a single row. Coxa III with three spines. Spines with long pinnulae (Fig. 4). Male genital structure with internal setae equally spaced, general facies as in Fig 3. Anterior genital operculum with four setae along each anterolateral margin. Chaetotaxy of sternites IV through XII 11:8:7:6:6:6:7:6:2.

Female essentially as the male but usually larger. Carapace length 410 μ to 450 μ , the palpal femur 590 $\mu \times$ 127 μ . Anterior genital operculum normally with five anterolateral setae on each side.

This species is described from eight males and ten females taken near Winters, Yolo County, California, on 23 April and 25 December 1959, by F. C. Raney. The April collection was made at the Putah Creek Ranchette, from the top 4 inches of litter beneath *Sambucus*, in complete shade. The December collection, near Winters, was from the top 3 inches of litter at the base of a *Quercus lobata*. The male holotype is deposited in the California Academy of Sciences.

KEY TO CALIFORNIA *Kewochthonius*

1. —Coxa II with seven spines staggered to form two rows
..... *spingolus* n. sp.
 Coxa II with four spines in a single row 2
2(1).—Small species, palpal femur of male less than 400 μ long; anterior
genital operculum of male with five pairs of anterolateral setae
(Fig. 5) *stanfordianus* Chamberlin
Large species, palpal femur of male 430 μ or longer, usually
over 450 μ; anterior operculum of male with four pairs of
anterolateral setae (Fig. 4) *amplus* n. sp.

LITERATURE CITED

- Chamberlin, J. C. 1929. A synoptic classification of the false scorpions or chela-spinners, with a report on a cosmopolitan collection of the same. Part I, The Heterosphyronida. Ann. Mag. Nat. Hist., ser. 10, 4: 50-80.